Practical Work 02

Exercise 01

Write a C program that take as input a number (n) and return as output a number (e) which calculated using the following formula:

$$e = 1 + \frac{1}{1+2} + \frac{1}{1+2+3} + \cdots + \frac{1}{1+2+\cdots+n} \quad n > 1$$

Exercise 02

Write a C program that shows a triangle of stars basing on a given number n as follow:

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Where n is the number of lines and stars of the last line.

Exercise 03

Write a C program that take as input an integer and show their divisors.

e.g: for a n=20, their divisors are: 1,2,4,5,10.

Exercise 04

Write a C program that ask a number X from the first user then ask the second user to guess X with 5 attempts, if he well guess the number a message tell him that he win else he loses.

Exercise 05

We say that an integer number (n) is perfect if the sum of it's divisors is equal to it's value.

e.g 6 is a perfect number because 1+2+3=6.

1. Write a C program that verify if a number n1 is perfect.

2. Modify the previous code in order to show all perfect number less or equal than a given number n2.

Exercise 06

The approximate value of π could be computed as follow:

π= -1/3+1/5-1/7+…+1/n.

Write a C program that ask for a number (n) then gives an aproximation of π accourding to n.